THE
VETERINARY JOURNAL

Editor :
FREDERICK HOBDAY, C.M.G., F.R.C.V.S., F.R.S.E.,
HONORARY VETERINARY SURGEON TO HIS MAJESTY THE KING,
OFFICIER DU MÉRITE AGRICOLE (FRANCE),
CAVALIERE DEI SS. MAURIZIO E LASSARO (ITALY),
HONORARY MEMBER OF THE AMERICAN VETERINARY ASSOCIATION,
PRINCIPAL OF THE ROYAL VETERINARY COLLEGE, LONDON.

Sub-Editor :
GLADSTONE MAYALL, M R.C.V.S.

FEBRUARY, 1928.

Biography

Edgar March Crookshank, Esq., J.P.

FEW men have had more to do with the ruling body of the Royal Veterinary College, London, than Mr. Edgar Crookshank, and it was a fitting compliment to his tact and ability that the Governors unanimously elected him as Chairman of the General Purposes Committee, Chairman of the Committee of Management of the Research Institute in Animal Pathology, and Chairman of the Building and Appeal Fund Committee, the latter of which presides over the scheme at present in hand for reconstruction and rebuilding.

In 1886, Mr. Crookshank founded the first laboratory in England for research and instruction in Bacteriology and Comparative Pathology at King's College, London; and Veterinary Students and Practitioners were admitted until accomodation was provided at the Royal Veterinary College for Studying the Science of Bacteriology, which was then in its infancy.

In 1890, on the proposal of Dr. Fleming, seconded by Sir Frederick FitzWygram, Mr. Crookshank was unanimously elected a Governor, a position in which he has rendered inestimable service to veterinary education and research for 40 years. No man has given more loyal service to agriculture and to veterinary education than Mr. Crookshank, and the whole veterinary profession is grateful to think that men are still to be found who so unselfishly put " service " before " self " on their behalf.

One of the greatest wishes of his life is to see the London College rebuilt and equipped so that it is worthy of England, and it is for all of us who wish well for the profession to do all we can to help this worthy object.

XUM

Editorial

R.S.P.C.A. Versus Veterinary Inspectors.

THE surprise with which certain members of the profession found themselves suddenly put in the dock on charges of cruelty can only be equalled by the regret that such a wide diversity of opinion could possibly appear to exist upon the application and meaning of the word " cruelty," between two such expert exponents of kindness to animals as the veterinary profession, and that body of workers who always loyally receive their support in any true cause of humanity to the brute beasts, The Royal Society for the Prevention of Cruelty to Animals.

When a house is divided against itself, that house cannot stand, and the cause of kindness to animals has received a shock in Great Britain which it will take years to recover from. Loyal combination between those whose whole life and training is devoted to the alleviation of animal suffering (and who *know* by practical experience and not by mere sentimental theory), and those who make it their business to search for, and endeavour to prevent, cruelty, has done much in this England of ours to make it spoken of as the pioneer of matters relating to kindness for animals.

It was a bold action to place well-known Government Officials and a much-respected Borough Official in the dock on such evidence ; and, although in each case the ending was a happy one, the affair has raised an unpleasant feeling of distrust which will require a lot of explanation to set straight. *Each individual member will realise that it might have been his own mental worry and anxiety, to say nothing of the monetary cost, had he (or she) been the unfortunate M.R.C.V.S. to be accused.*

General Articles

AN APPEAL FOR FUNDS FOR THE REBUILDING AND ENDOWMENT OF THE ROYAL VETERINARY COLLEGE, LONDON.

By FREDERICK HOBDAY, C.M.G., F.R.C.V.S., F.R.S.E.,
Honorary Veterinary Surgeon to His Majesty the King, and Principal of the Royal Veterinary College, London.

THE time has now arrived for the Royal Veterinary College, London—the pioneer veterinary school, not merely of Great Britain and Ireland, but of our colonies and all the English-speaking countries—to assert its right for outside assistance, in addition to the private and loyal support of its graduates and the friends of sick animals (by which it has been maintained in the past), in order to rebuild and equip it in a manner which will bring it up to date, and make it not only worthy of its Royal Patron and the distinguished names on its Board of Governors, but able to take its place as the representative of the British Empire amongst all the colleges of the world.

It is only financial aid we ask for—the graduates of the profession can do all the rest—but it is neither fair on the staff nor the profession for the Government and the Public to expect that we can compete with the progress of veterinary science in other countries when their veterinary schools are efficiently endowed and State-supported on an equality with human medicine, law, engineering, and all the other learned professions, and in Great Britain we are left to do as best we can by private enterprise. Is it not an anomaly—a curious anomaly—that in England, *the* most animal-loving country of the world, the one country, too, to which all other countries send for their best pedigree stock of all kinds, veterinary science, the one science which is best fitted to cater properly for the preservation of animals in health, should be so scandalously neglected? It is a scandal, and the London College is open evidence of this neglect. In fact, it is really marvellous when you look around the old, antiquated, tumbledown premises, which constitute the Royal Veterinary College, that students are turned into graduates who hold their own, not only in every part of the British Empire, but in every part of the world—at any rate in the practical part of their profession. As administrators we hold our own, too, for that is the character of the British, but in scientific research our opportunities are nothing like those of our Continental neighbours—and when one compares a selection of photographs from the wonderful buildings and completely-equipped colleges of Germany,

XUM

France, Belgium, Denmark, Sweden, Norway, Italy, Spain and North and South America, one can readily understand how the progress of veterinary science is encouraged and made comparatively easy, and on a *par* with that of our brothers in human medicine and the allied sciences.

It is not only in buildings and equipment that our Continental *confrères* have the pull over us. Most of them have a University status, which has only recently, and in a patchy fashion, been granted to us; and the teachers who occupy the professional chairs have a safe tenure of office so that they can settle down to specialise and "make good" in their own respective branches, with the knowledge that their salary is assured for life, and a satisfactory pension on retirement. Not only have they this assurance, but a certain sum is allotted every year for replenishment of equipment, to be spent at their discretion. Their laboratories are not stinted to begin with, and they all have one or more qualified assistants who are trained helpers; the senior with a salary sufficient to induce him to stay for some years with his chief, and thus to specialise. For those men there is always the advantage of the chance of selection for any vacant professorial chair, as they are already trained for the subject, and have received the proper and necessary instruction for such a post.

The British veterinary graduate cannot afford to wait some years in poverty, not only pecuniary poverty, but poverty of equipment. After stating that the comments about to be made concerned a subject of vital interest to the nation at large—the sporting correspondent* of a well-known newspaper recently stated: "What I have in mind is the existing state of affairs at the Royal Veterinary College, Camden Town. I have no hesitation in saying that, in its present condition and equipment, the famous old College is a national disgrace"—strong words they may be, but not one whit too strong. "Here we find buildings so rotten that some stand propped up and condemned by the L.C.C.; others dark, gloomy, and even if in thorough repair, hopelessly out of date and entirely inadequate. We find, too, a highly skilled staff, comprising men whose names are household words in their profession, abroad as well as at home, carrying on as best they may in conditions sufficient to damp the ardour of the most enthusiastic." Then, after allusion to the good work done in the Out-patients Department, for the sick animals of the poor, this writer goes on to say, "But the place which the College fills in the life of the nation is of far higher and wider import. It is under its direction that the veterinary surgeons of to-morrow receive their education and are taught the value of observation and research. Almost day by day

* Capt. Browne (Pegasus), of the "News of the World."

the link between the medical and veterinary professions becomes closer and more intimate, and the skilled Professors now giving their services at the College are turning out men who, apart from such eminence as they may later on achieve in their own profession, will no doubt contribute in no unimportant measure to the tracking down of obscure diseases affecting man as well as animals." Alluding then to the ravages and economic loss of such animal diseases as foot and mouth disease, this observer goes on to say, "It is to such questions of national importance as this that the Royal Veterinary College should be able to turn its attention. But for such subjects as this, adequate financial provision is necessary. As a matter of fact, the Royal Veterinary College itself is in urgent need of funds. It is estimated that to carry out the necessary rebuilding and equipment of this splendid institution, the sum of £250,000 is required. Somehow or other the money must be found." After alluding to the offer of the Treasury to grant pound for pound up to the sum of £35,000, the writer makes an appeal to the public to help towards getting together the sum required.

Are we not a national asset? Think what would happen to the livestock of the country (and livestock are the backbone of the agricultural industry) if members of the veterinary profession went on strike!—or if no scientifically-trained veterinary surgeons existed! Epidemics amongst all kinds of farm stock would speedily appear in the country. Outbreaks of Foot and Mouth, such as we get now, would be very small troubles and losses to what this disease would cost the country if it became universal. In the town animals, glanders in horses (now stamped out solely by veterinary supervision), and rabies in dogs—two most typical and horrible diseases, each contagious to man, would cause havoc far and wide; and such law and order as we have now in regard to all the scheduled animal diseases would give way to chaos. The beginning of all these things must, perforce, be a scientific veterinary training; and this can only be obtained by a thorough grounding in a Veterinary College.

One can readily demonstrate, by means of illustrations, the high opinion other civilised countries have of the veterinary profession, and with what care their respective Governments cater for and equip the starting point of the veterinary student. There are none which treats its veterinary education worse, or in a more haphazard fashion, than Great Britain—we who pride ourselves on thinking that we are *the* country of the world who gives the lead to others in matters of kindness to animals. Surely kindness to the sick animal is as important as kindness to those which are well and the sick animal of the poor

XUM

has an equal moral right to be treated by a qualified veterinary surgeon as the sick animal of the rich.

The Royal Veterinary College was the pioneer of the movement to supply veterinary treatment for the sick animals of the poor, and hundreds of thousands of animal patients have passed through the College Poor People's Outpatients Department, all being treated under the control of a Professor in Charge, who is always a duly qualified Member (or Fellow) of the Royal College of Veterinary Surgeons. This is in contrast to the practice adopted by certain so-called Humane Societies who profess to treat the sick animals of the poor, and allow the diagnosis and " treatment " of their diseases to be done by quacks and unqualified men, whose ignorance of disease is deplorable, the poor dumb beasts having no redress as they have not the power to complain. Such practices, especially as these Societies appeal for money to the kind-hearted public, should be stopped by law as fraudulent.

The first scientific veterinary school was founded at Lyons in 1762, and this was followed in 1766 by the magnificent buildings at Alfort, just outside Paris.

FIG. 1.—Some of the Buildings of the Alfort Veterinary School, Paris.

Turin (which city was then Austrian) followed in 1769, and the School there is a Faculty of the University, as are all the Veterinary Colleges of Italy. The Universities of Bologna and Milan, in particular, have the latest up-to-date buildings and equipment; that of Milan having been rebuilt since the war.

In 1773, the world-famed School of Copenhagen was built, this at the present time covering a very large area of ground, but being carried on in collaboration with the Agricultural School. In fact, so intimately are they connected, that the Directorship is alternately occupied by one of the professional veterinary staff and one of the occupiers of an agricultural chair.

Vienna was built in 1777 and Hanover in 1778.

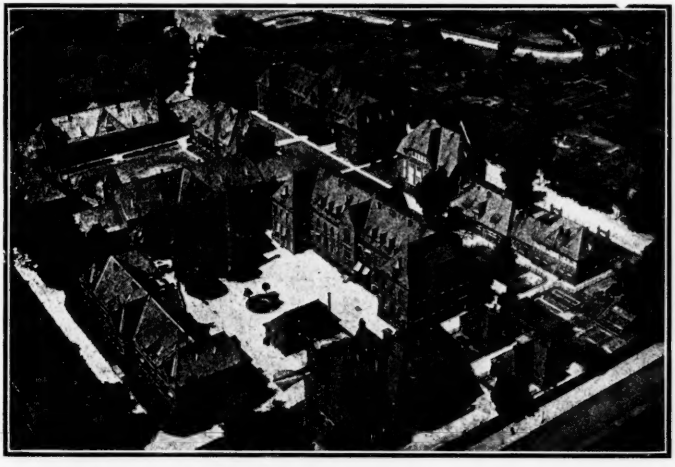


FIG. 2.—The Veterinary High School, Hanover, Germany.

FIG. 3.—Exterior of the Buildings of the Veterinary Faculty of the University of Leipzig, Germany.

Dresden, which was built as a High School, in 1780, was transferred to the University of Leipzig in 1922, and these buildings are the very latest thing in veterinary structure and equipment.

Berlin came along in 1790 and London in 1792.

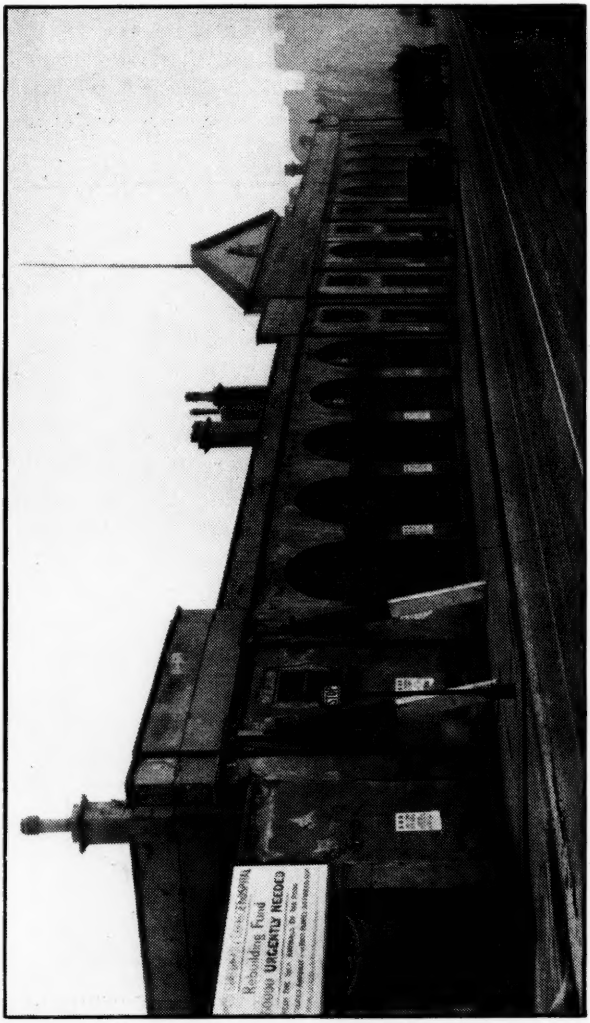


FIG. 4.—The Exterior of the Royal Veterinary College, London.

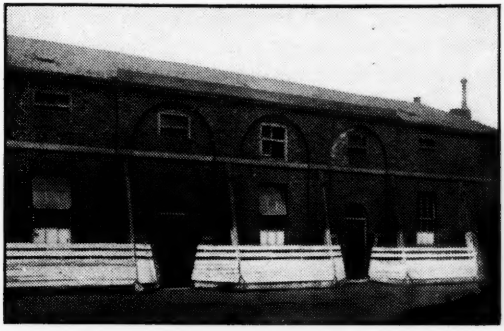


FIG. 5.—The Propped-up Buildings (Professors' Offices and Stables) of the Royal Veterinary College, London.

Madrid was built in 1793 and Bern in 1805.

St. Petersburg in 1808 (no longer existing) and Naples in 1815, and Zurich in 1819.

In 1819 the Swedish School of Skara was given up and a veterinary school was founded at Stockholm—recently remodelled and rebuilt. A splendid school.

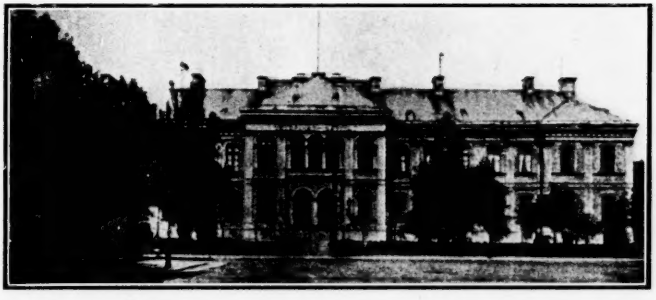


FIG. 6.—One of the Buildings of the Stockholm University Veterinary School.

In 1821 Holland built a school at Utrecht, and it is now being remodelled as a Faculty of the University.

XUM

It was in the year 1825 that the Dick Veterinary College in Edinburgh came into existence; a building which has recently been evacuated in favour of the new college which was erected a few years ago, but still awaits sundry details to complete its interior.

FIG. 7.—The Anatomical Institute of the Veterinary Faculty of the University of Utrecht.

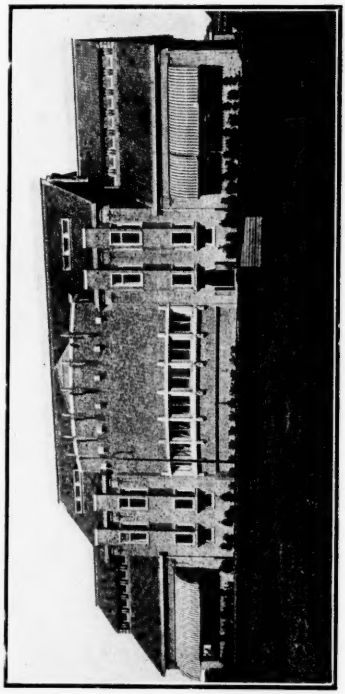


FIG. 8.—The Canine Department of the Veterinary Faculty, University of Utrecht.

In 1832, Brussels was founded and the old school was rebuilt and transferred to its present site at Cureghem about 25 years ago. It is interesting to note that during the late war it was made great use of by the Germans as a serum preparation station.

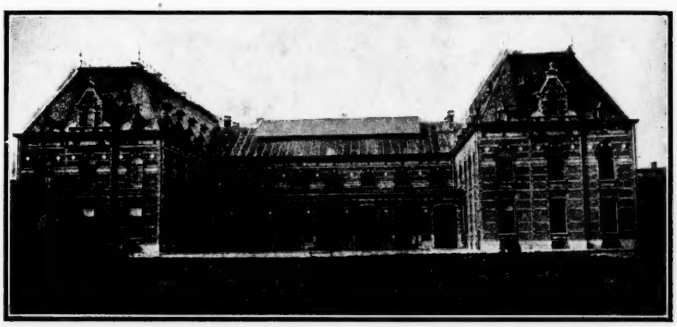


FIG. 9.—Equine Clinical Department of the Veterinary Faculty, University of Brussels.

1840 saw the birth of a Polish School at Warsaw, and this has now been rebuilt and modernised.

FIG. 10.—One of the Buildings of the Veterinary Faculty of the University of Warsaw, Poland.

XUM

In 1848 Russia built Dorpat, in 1839 Kharkov, 1874 Kazan, and in 1881 Lemberg.

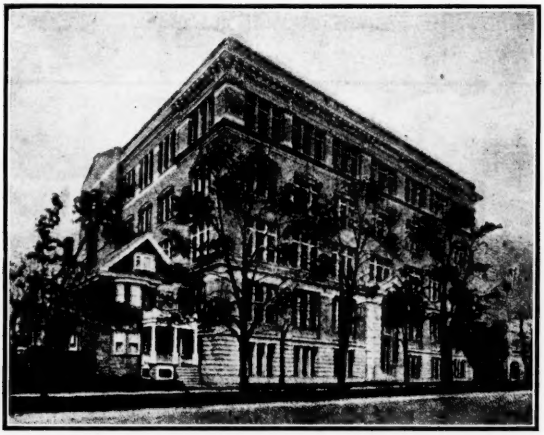


FIG. 11.—McGill University Veterinary Faculty, Toronto, Canada.

North America has banished altogether its private teaching veterinary schools and permits only State or University Veterinary Schools to exist. The College of to-day, to be up with the times in research and practical equipment, needs Government aid financially, without, in order to be ideal, being crippled by too much motherly Government control.

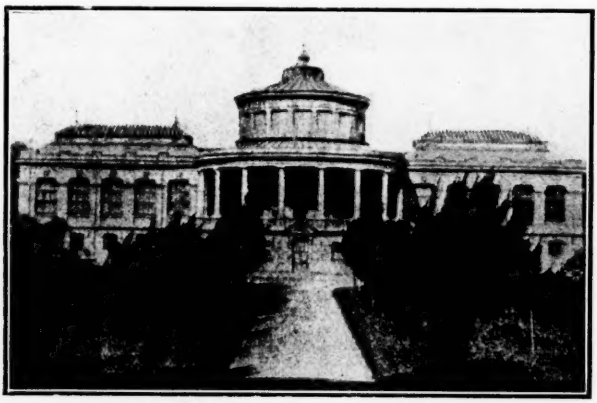


FIG. 12.—One of the Buildings of the Veterinary Faculty of the University of Monte Video, South America.

Dissecting Room.
Dairy Cattle
Operating Room.
Hospital Ward.
Bacteriological Lab'y.
OHIO
UNIVERSITY
College of Veterinary Medicine

FIG. 13.

FIG. 14.—Kansas University Veterinary and Agricultural Faculties, U.S.A.

It costs a minimum of £20,000 to endow a Professorial Chair, and the sum asked for (£250,000) is not a bit too much if the London College is to be made worthy of England, and so that it can hold its own amongst the Veterinary Colleges of the world.

There must be scores of animal lovers, who, if they can only be found, will give £1,000 to endow loose boxes or infirmary stables to perpetuate the name of a well-known racehorse or favourite hunter, the comrade of many a day's good sport; or £100 to hand down to posterity, by means of an endowed kennel, the name of a beloved dog, the trusting (and trusted) pal who never made silly arguments or disputed the word of his (or her) master or mistress.

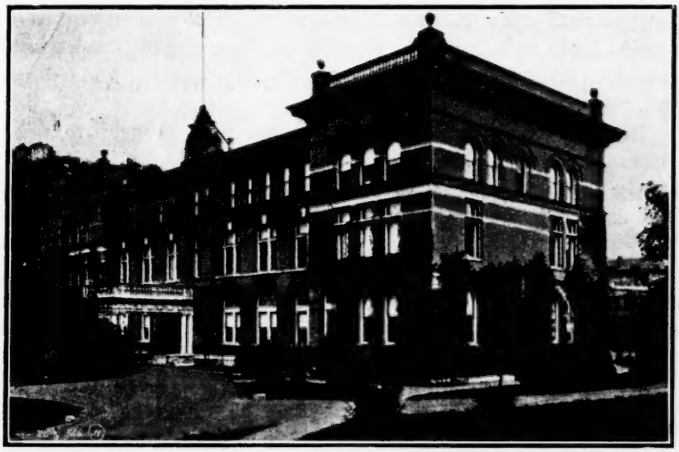


FIG. 15.—Cornell University Veterinary Faculty, U.S.A.

Surely there must be 100,000 sporting men and women in England who will give £1 apiece to such a worthy object and for the sake of the sick animal which is unable to help itself! Already there has been a response of nearly £20,000, which, with the Government grant of pound for pound means £40,000, with which one can commence some of the buildings—but it is necessary to wait until most of the other money is collected before one can begin the work in real earnest. Contributions and legacies, etc., should be made out to the Earl of Northbrook, the Hon. Treasurer of the Royal Veterinary College, Camden Town, London, N.W., who will be only too pleased to acknowledge them and to do anything he can to further the good object involved.

Figs. 3, 4, 5 and 7, are published by arrangement with the "Veterinary Record."

XUM

A RAPID METHOD OF TESTING CATTLE FOR INFECTIOUS ABORTION.

By LL. E. W. BEVAN, M.R.C.V.S.,

Director of Veterinary Research, Southern Rhodesia.

At the sixty-third annual meeting of the American Veterinary Medical Association held in Lexington, Kentucky, August 17th-20th, 1926, Huddleson and Carlston presented a paper on "A rapid method for performing the agglutination test in the serum diagnosis of Bang's abortion disease in Cattle."

Briefly, the method consisted of the preparation of a highly sensitive antigen by growing a strain of the *B. abortus* on beef-liver-infusion broth until luxuriant growths had been obtained which were washed off with a 12 per cent. sodium chloride solution, and 0·5 per cent. phenol.

The sera and tubes used for the test were brought to room temperature (65° to 70° F.). Different amounts of sera were used, namely 0·08, 0·04, 0·02, 0·01 and 0·005 c.c. To each tube of undiluted serum was added 0·04 c.c. of previously standardised antigen, by means of a standardised dropped-bulb pipette. The serum and antigen were mixed in tubes by vigorous shaking for ten seconds, at the end of which flocculation was in most cases complete if serum agglutinins were present in considerable quantities. It was found that there are sera, occasionally encountered, which appear to clump the antigen slowly. A practice was therefore made of again shaking the tubes five minutes after the first time, and tabulating the results 15 minutes from the time of mixing. The rapid method was compared with the usual slow method in 2,000 samples of bovine sera and the results were found to be identical in 100 per cent. of cases.

Later, glass plates ruled off in inch squares were substituted for the tubes. In these squares the serum and antigen were placed and were mixed by means of a tooth pick. Flocculation began almost immediately and was complete in less than five minutes.

Attention may be drawn to the fact that for the performance of this test the blood would presumably have to be collected in the usual manner from the jugular vein, that some time would have to elapse before the serum separated from the clot, and that considerable manipulative skill would be necessary to measure the minute quantities of serum and antigen to obtain the accuracy required.

In 1915 the writer of this note described in the *Journal of Comparative Pathology and Therapeutics*, Vol. XXVIII, No. 4, a simple method of collecting and preserving blood for the agglutination test

for the diagnosis of infectious abortion. This came to be known as the " pipette method," and in Southern Rhodesia entirely supplanted the old method of collection of blood from the jugular vein into bottles which, under the conditions obtaining in that country, rarely arrived at the laboratory free from decomposition and suitable for the test.

In 1921, at a meeting of the Southern Rhodesia Veterinary Association, he demonstrated an improvement of this method in the form of a little instrument called the " Abortoscope," by means of which the blood could be collected from the ear of the susceptible animal in a standardised metallic loop holding the necessary quantity of blood to give, when mixed in a small phial with a standardised and highly sensitive suspension of *B. abortus*, a dilution equivalent to 1–80 to 1–100. The amount of blood collected varied slightly, but if too much were taken in the loop it fell out ; if too little, a *bead* of blood was not formed as directed. Thus, the quantity of blood was, in the hands of an operator endowed with average common sense, approximately correct. The blood and suspension having been thoroughly mixed by shaking, were allowed to stand in a warm place, and after 18 hours a definite reaction could be ascertained by the fact that the word " infected " could be read through the phial. If the serum did not contain agglutinins the word " infected " could not be read through the opaque suspension.

The method was intended to enable the general practitioner himself to apply the agglutination test in the field for the diagnosis of specific abortion of cattle. It is true that a single dilution of 1 in 100 was considered sufficient to justify him in coming to the conclusion that the animal tested was, or had been, infected with the disease. By using two or more drops dilutions 1–50 or 1–25 could be obtained, but in view of the danger of auto-agglutination in such dilutions, these were not recommended. Nor was it thought necessary to use weaker dilutions than 1–100, because such refinements are not necessary in practice. Indeed, all that the agglutination test even under laboratory conditions can indicate, is whether the animal is or has been infected. It cannot tell for certainty whether it has aborted, will abort, is temporarily infected or is a " carrier." The laboratory worker, at the long last, must leave the interpretation of his results to the clinician.

On the other hand, the " Abortoscope " method had several advantages over the old laboratory method, for example, it could be applied by the practitioner himself without reference to a laboratory : the results were forthcoming within 18 hours or less : a single drop of blood was collected from the ear instead of a bottleful from the jugular vein, and the disturbance and effort associated with the

XUM

latter performance was avoided. Moreover, the blood being fresh, was free from the alterations associated with keeping and decomposition, which so often vitiate the laboratory test. Last, but not least in importance, the practitioner himself earned the full fee and obtained the kudos for the performance of a scientific test.

In cultivating the specific organism for the suspension used in the above test, a very luxuriantly growing strain was produced and one which was highly sensitive to agglutinating sera. So rapidly did the organism respond to a positive serum that it was found that flocculation frequently took place in less than half an hour, and those systematically using the method were often able to give a definite positive diagnosis in a few minutes by the characteristic flocculation and rapid collection of clumps at the bottom of the tube.

Realising that the method was capable of such results, it was decided to ascertain whether it could be modified to yield a still more rapid diagnosis after the manner of the Huddleson test. In the " Abortoscope " method whole blood is used, and it was thought that if this did not obscure the reading, the time lost in waiting for the separation of the serum from the clot, would be saved. The tests proved entirely successful and the following procedure was found to give the desired results :—

Blood was collected from the ear into the loop in the usual way and was added to the suspension in the abortoscope and mixed thoroughly by shaking. A small quantity of the mixture was then shaken out on to a microscopic slide, and spread out into a round pool about the diameter and depth of a sixpenny-piece. The slide being heated over a spirit lamp, or even by means of a burning match, flocculation was found to take place almost immediately if the blood came from an infected animal : on the other hand, no such flocculation occurred if the serum of the animal did not contain the specific agglutinins. With a normal blood the mixture remained homogeneous, but with a " positive " blood the bacteria clumped together in a very characteristic manner, so that they appeared as small granules of varying size distributed throughout the diluting fluid. The point of practical importance is that the whole test as described can be carried out and a *definite diagnosis be arrived at within less than five minutes* after the securing of the animal and the collection of the blood. As only one drop of the contents of the abortoscope is used in the rapid test the remainder is available for carrying out the test in the usual manner, and if further confirmation is required the old laboratory method can be resorted to.

The whole procedure is so simple and the results are so accurate that it is hoped that this rapid test may be of considerable practical

value to the general practitioner, enabling him to determine in a few minutes and " on the spot " whether an animal is or has been infected with contagious abortion. Such a test can be applied in a hundred and one circumstances, for example in ascertaining whether an abortion is a case of the specific disease or not ; whether sterility in a cow is associated with abortion disease ; whether a bull or a cow about to be purchased is free from infection ; whether an animal is a " carrier," and so on. It should enable the practitioner to give without delay, reliable advice to his client, based upon a scientific procedure.

NOTE.—Owing to the cost of production and distribution, the issue of the " Abortoscope " has been temporarily suspended, but it is hoped that in the near future it will again be available to members of the medical and veterinary professions, at a lower cost than hitherto.

VETERINARY EFFORTS IN NORTHERN RHODESIA IN THE EARLY DAYS.

By FRANK WORTHINGTON, C.B.E.,

Late Secretary for Native Affairs in Northern Rhodesia.

IN the early days of Northern Rhodesia—say 30 years ago—there were no doctors, let alone veterinary surgeons, so we had to do the best we could for ourselves, our horses and our cattle.

Being the fortunate possessor of a Burroughs and Welcome pocket medicine chest of assorted tabloids, I soon became looked upon by whites and blacks alike as *the doctor*. I must confess that " three or more as ordered by the physician " on the labels of the tabloid bottles, gave me much anxiety at times. When giving a dose, I went by weight—by the weight of the patient, I mean.

After a little while I became veterinary surgeon, too. Jan van Rensburg, a Dutch transport-rider-hunter-trader, taught me very nearly all he knew, and though his methods might be regarded by a qualified man as rough, ready and crude, I really think that our efforts met, perhaps, with some measure of success. We had no critics—which was a comfort to us—for if we knew but little, others knew far less of veterinary science. Perhaps a short account of our methods would interest the regular practitioner.

Castrating.

A bunch of young bulls had to be castrated ; to be " cut " we called it. There were 18 of them, and they gave the cows no rest. Armed with a *bushman's friend*, which is a long-bladed sheath-knife

XUM

of very mild steel, and half a bucket of coarse salt, van Rensburg and I got busy—as the American says. My instructor sharpened the knife on a piece of sandstone and finished it off on his boot, giving it a keen saw-edge. My dozen or so black cattle-herds threw the first bull and sat upon him, one holding the animal's tail forward between his legs and hauling on it like a sailor on a rope. Van Rensburg told me to clutch the purse above the testicles, to prevent the bull from pulling them up out of reach, and to hold on whatever happened. This I did. He then sliced off the end of the purse with a bold cut of the saw-edged knife and squeezed the testicles out. Taking one of them in his left hand and turning it round and back with rapid turns of his wrist, he cut it free with a scraping motion, and then did the same with the other one. I asked him why he didn't make a clean cut of it. He said that the bull would probably bleed to death if he did.

Having removed both testicles, van Rensburg took a handful of salt and rubbed it well into the wounded purse. Then we all jumped clear and the poor beast walked slowly away, staring hard at the ground as if he had lost something. Hardly any blood flowed from the wound, and after moving about rather stiffly for a few days, he appeared to be none the worse. During the operation, if such it may be called, the bull breathed very heavily, but beyond that made no protest.

After van Rensburg had castrated two or three of the bulls he suggested that I should try my hand under his direction. I did so, and cut the rest of them. Van Rensburg's only adverse comment was that I did the job too carefully, and took too long about it—probably the wretched bulls thought so, too !

We did have one mishap. One of the boys let go the tail of a bull van Rensburg was cutting. I was holding on to the purse above the remaining testicle, for van Rensburg had removed one. The half-cut bull switched me in the eye with his tail. I let go my grip of the purse and up into his belly somewhere and out of reach went that half-cut bull's second testicle. Van Rensburg tried to coax it down by kicking the poor beast in the paunch, until I told him to stop. So that bull got off with " half and half " as it were, and so remained for the rest of his life, which came to an end when next we ran short of fresh meat.

Tulp—a Poison.

What *tulp* really is I never knew. It is the Dutch for tulip. I hunted for tulips on the veld without success. I gathered from van Rensburg's description that the tulp is a small bulb with thin grass-like leaves, very difficult to distinguish from grass, which cattle pick up whilst grazing. He was concerned only with the effects upon the stock of eating this tulp, and with applying his simple remedy.

The symptom—for there was but one—was unmistakable. The beast's belly became tremendously distended. The treatment was simplicity itself. The sufferer was gently thrown. Gently, because van Rensburg said that if we were too rough the creature might burst! The ox, bull or cow, was a strange sight when thrown. Its belly was positively balloon-like. Van Rensburg produced the inevitable *bushman's friend* knife and stabbed the creature just where—as he explained it—" the guts touches the hide."

Wind escaped with a whistle and a spray of juice and grass particles. Gradually the balloon subsided. When the knife-wound ceased to whistle, we all jumped clear. The treatment was over, the beast obviously relieved, and the cure assured. I cannot remember that we lost a single beast from tulp poison if the cattle-herds had reported the matter in time for us to reach the animal and operate upon it before it died. I have been out of practice now for many years and can no longer remember whether it was the near or the off side that we used to stab, but I seem to remember van Rensburg begging me to be very careful as one side meant cure, but the other kill.

Grease Pill.

Van Rensburg was a great believer in grease pill for cattle. If a beast looked off-colour, " he must have a grease pill," he used to say. This specific for many ills was made of the stale black grease scraped from around the axle-pin of the wagon, rolled into a ball the size of a bantam's egg and wrapped in a piece of old newspaper. To administer the pill, the herd-boys clung on to every corner of the ox, lifted his head, hung on to his lower jaw, and pulled his tongue out sideways as far as it would go. Van Rensburg, perched on the bottom of an upturned bucket and facing the ox, bided his time with the pill in his hand. At the very first lull in the struggle, he threw the pill with unerring aim into the patient's open mouth, jumped down from his bucket and delivered a hefty blow or two at the beast's upturned throat.

I don't know what the medicinal properties of axle grease may be in its pure state, but heaven alone knows what particles of foreign matter it picked up as the wagon travelled through the veld; nor can I say whether it was the grease or the foreign matter it contained which effected the cure.

Van Rensburg had another use for axle grease culled from the hub. He anointed a wound of any sort with it from a yoke-rubbed hump to a deeper than skin-deep gash. As regards its application to wounds, flies didn't like it—which was a comfort to the dumb beast anyway.

XUM

I don't know to this day what causes a bluish film to dull the eyes of a trek-ox; neither, I believe, did van Rensburg, but he knew the cure for it.

There abounds in Africa a creature with a thousand legs. It looks like a gigantic wire-worm. It is five or six inches long and as thick as one's little finger. When it has been dead some time its shell becomes sun-bleached and whitish. If he saw an ox with *blue eye*, as van Rensburg used to call it, he would send one of the cattle-herds off to look for a few shells of the dead giant wire-worm. Removing the creatures' desiccated legs, he proceeded to pound the shells in a potsherd with a stone until he had made a fairly fine powder of it. The cattle-herds formed clusters on the ox as for administering a grease pill, but this time the beast's head was held in the normal position. The head cattle-boy then held the lids of the near eye wide open and van Rensburg blew a couple of ounces of the powder into it through a piece of folded paper. A week later he treated the other eye, explaining that if you fixed up both eyes at the same time the ox would probably fall into a water hole.

The first result of the treatment was a much-inflamed eye, but after a while it became normal and appeared to have cleared in a remarkable manner.

Lung-Sickness.

Lung-sickness was our greatest curse and gave us most to do. We inoculated for lung-sickness, taking our serum direct from the lung of a beast suffering from the disease.

When infection was suspected, we collected the cattle and told the herd-boys to run them round; that is to say, the mob was chased all over the veld by the boys who shouted and wildly brandished their sticks. When pushed into a gallop, the herd was headed for a hill. The beast most out of breath was declared a "lunger," or pretty far gone in the disease. When the mob had settled down, the lunger was shot and we settled down to business.

On one occasion when we had shot a very pronounced "lunger," a young heifer, and had opened her up by whipping off her shoulder and cutting through her ribs with a small American axe, we were surprised to find that she wasn't a lunger at all. Examination revealed the cause of excessive blowing when run. Imbedded in her lung was the bent blade of a barbed assegai, some seven inches of corroded iron! How it came there remained a mystery. That it had been there some time was obvious from the state of this piece of metal. The heifer was in quite good condition, and we could find no scar on the skin when we flayed her. Probably some mischievous cattle-herd

had slung his assegai at her early in life, and lost the blade for his pains.

But in the usual way, having removed the shoulder and cut through the ribs, the *liquor*, as van Rensburg called it, was carefully baled from the region of the lungs with a tin mug and poured into a bucket, care being taken to avoid, as far as possible, any blood. An old cotton blanket, originally white, but now decidedly off colour from much use, was cut into strips about an inch wide and three inches long. These pieces were slung into the bucket of liquor and allowed to soak.

Meanwhile the cattle had been driven into the kraal and a ramp had been made by removing some of the poles which formed the wall of the kraal and building an alley-way so narrow that when there the single ox which it admitted could not turn. The beast was kept in the ramp—whilst being inoculated—by a gate in front and a number of poles pushed across behind him.

Two parallel slits were then made in the skin of the beast's tail, about an inch apart and two inches long, and the blade of the *bushman's friend* was slipped between the skin and the bone, making what van Rensburg called an *eye*. Into this eye or loop a piece of liquor-soaked cotton blanket was threaded. This completed the operation. The contracting skin held the strip of blanket in position.

In some instances the end of the beast's tail sloughed off, but that was regarded as a good sign, for it meant that the inoculation had taken well and the short tail remained as a sign to the cattle-world that the ox was *salted* or immune from a second attack. We had to watch these tails carefully, for if a swelling ran up the tail and into the rump, death often followed. If the swelling showed a tendency to mount, we took a red-hot iron and burnt deeply into the skin a complete ring round the root of the tail. Inflammation didn't seem to be able to pass up beyond the ring, but whether this is science or witchcraft, I cannot say.

Calves we did not inoculate; we drenched them. I never felt quite happy about this drenching. It was by way of being a preventive measure. Van Rensburg would fill a Worcester sauce bottle with the *liquor* and pour it down the calf's nose! I say "down" because, under van Rensburg's instructions a hefty cattle-boy held the calf as a woman does a baby. Few died from drenching, but all coughed with energy.

Van Rensburg always drenched cattle through the nose, and heaven alone knows what he put into the unfortunate beasts. Salts, I know, he gave them, but some of his secrets he did not divulge, even to me. He would chuckle to himself when I suggested that what he put in at the nose went to the lung and not to the stomach.

Van Rensburg has long since been gathered to his fathers, and I have not practised these five and twenty years. But I don't suppose we are missed, for there are veterinary surgeons in Northern Rhodesia now, not to speak of doctors.

A FURTHER NOTE UPON IMMUNIZATION AGAINST TUBERCULOSIS IN CATTLE.*

By NATHAN RAW, C.M.G., M.D.,
London.

THE primary object of my work in the endeavour to prevent tuberculosis in cattle, is to reduce the amount of tuberculosis which is directly conveyed to children by the milk and dairy products of cows suffering from the disease. It is estimated that about a million dairy cows in Great Britain are already infected.

The most dangerous cows are those affected with disease in the udder, but it has been proved that cows may pass tubercle bacilli in their milk without the udder being able to be definitely diagnosed as being affected.

A vast amount of tuberculosis in young persons is directly caused by drinking milk from dairy cows affected with the disease, whilst the yearly loss to the farmer and stock breeder is enormous, amounting in some countries to millions of pounds. For these reasons it is imperative to do all in our power to eradicate the disease from cattle if we are to prevent a never-ending supply of tuberculosis in children.

The disease is infectious, and is caused in every case by tubercle bacilli which are conveyed to the calf, either by its mother's milk, or by contaminated byres. Practically all calves are born healthy and free from tuberculosis, but if in association with infected animals or cowsheds they rapidly develop the disease.

It is of immense importance to the farmer that he should have a tubercle-free dairy herd, otherwise he is handicapped with regard to his milk supply, as well as great monetary loss in stock.

To obtain a tubercle-free herd the policy of slaughter of all reacting cows has been adopted in some countries, notably in America, and although this method is effective, it is a costly one.

The method I propose is to immunize all calves at birth, by means of a vaccine prepared from dead cultures of attenuated tubercle bacilli, and which have taken over 20 years to prepare in my laboratory.

The vaccine is perfectly harmless and most efficacious, and will

* Previous communications from Dr. Nathan Raw and Mr. Arthur Payne, F.R.C.V.S., upon this subject have appeared in the VETERINARY JOURNAL for 1924, 1926 and 1927.

protect the calf against infection, if the conditions are properly carried out. This method has been used by a large number of veterinary surgeons during the last three years, and records have been kept of 740 calves, chiefly of pedigree stock.

In the VETERINARY JOURNAL of December, 1924, Mr. Arthur Payne, F.R.C.V.S., records the results of his vaccine treatment and has described the method as an unqualified success. He has been able to procure a tubercle-free herd where previously he had 50 per cent. reactors. Mr. Payne first adopted my method in February, 1923, and he has continued it up to the present time.

For the purpose of immunizing calves they should be separated from the mother at birth and fed on healthy milk or the pasteurized milk of the mother for a week, when the first dose of vaccine is given. The second dose is given in another week. It is given hypodermically in the flank with strict antiseptic precautions, after which the calf resumes its ordinary life in the herd. The exact duration of immunity is not yet known, but in a large number of calves it has been shown to be over three years.

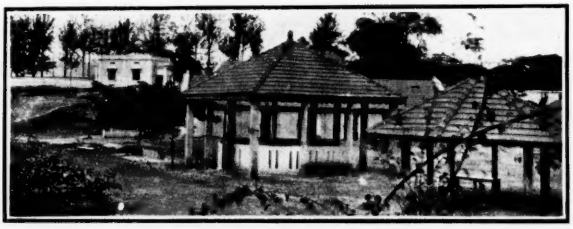
The question is of such immense importance both to stock breeders and to the rising generation of children, that it is our duty to adopt every means possible to stamp out tuberculosis in cattle.

The vaccine is prepared and carefully standardized by Messrs. Allen & Hanbury, Vere Street, London.

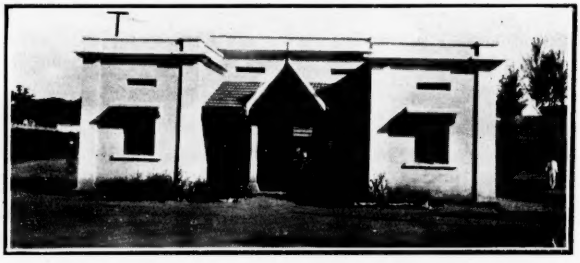
TASKER VETERINARY HOSPITAL, BANGALORE.

NESTLED in a picturesque and cosy but busy corner of the Civil and Military Station, Bangalore, is situated the Tasker Veterinary Hospital. Starting its useful career in a rented building in the year 1919, it is now the proud possessor of a pile of pretty buildings—thanks to the untiring efforts of Mr. T. J. Tasker, I.C.S., O.B.E., the former collector of the Station, who obtained a grant of Rs. 64,000 from the Government of India for the purpose, and after whom the hospital is named. Besides the residential quarters of the Superintendent in charge and his Veterinary Assistant, the Compounder and others of the staff, there is individual accommodation for 24 dogs, 12 horses and 12 cattle. Horses and dogs form the bulk of daily attendance.

The hospital has an up-to-date surgical ward, distemper ward, observation ward, wards for contagious and non-contagious diseases, washing and drying yards. The dog kennels, smart and comfortable,



Operation Theatre, Dressing Theatre, Horse Ward, Isolation Ward.



Office and Pharmacy.

Operating Travis.

are the centre of attraction and admiration. The several buildings were designed and executed by Mr. W. H. Murphy, A.M.I.C.E., M.B.E., of Bangalore. The Superintendent in charge is Mr. M. R. Chengeri, G.B.V.C., a post-graduate of Lahore.

The photographs were kindly taken by Sergeant P. W. White, Sappers and Miners.

Clinical Articles

Case of Tuberculosis in a Thoroughbred Mare.

By H. C. ROCKETT, M.R.C.V.S.,
Salisbury.

I WAS called in to see this case because she was off feed and was perspiring at the flanks. She was due to foal in about 2½ months.

Apart from the sweating and lack of appetite, she did not show anything very definite—temperature normal, pulse steady, but a little weak, slight œdema under abdomen.

I was not able to arrive at any definite diagnosis, but suspected there might be some uterine trouble.

However, in the course of a day or so I decided that was not the case as there was no discharge and the foal was undoubtedly alive.

Pulse remained about the same, but the temperature fluctuated from normal to about 104, and the sweating varied too, also the œdema became more marked, and the legs filled a little, though not badly.

I diagnosed "a tumour," and left it somewhat vaguely at that. Treatment seemed pretty hopeless so I confined myself to small doses of tonic to try and get her feeding, as the owner would not have her destroyed as at her previous foaling (with a different owner) she had apparently shown somewhat similar symptoms and had recovered.

This went on for about three weeks, the mare getting gradually weaker, but the foal was alive almost to the end.

Eventually she got down (the first time since she was noticed to be ill) and died quite quietly.

Post-mortem examination revealed her about as rotten as any screw cow.

Lungs normal, but the pericardium a good deal roughened. Liver normal, except somewhat large, spleen, a huge tumour-like mass, weighing 84 pounds, and the kidneys were involved too, whilst the abdominal wall was quite "grapey."

This mare had never looked well since she was purchased, and the stud groom had never been pleased with her, she had been irregular in feeding and she always seemed a little constipated, the fæces that were passed were always in very small balls, too. I took scrapings from the spleen, and think that there is no doubt that the trouble was tuberculosis.

Tardy Removal of the Placenta in a Mare.

By H. C. ROCKETT, M.R.C.V.S.,

Salisbury.

ONE Thursday afternoon I was asked to see a Suffolk mare that had foaled about two months before time, the previous Sunday. She was off her feed, a little stiff, membranes infected and had a temperature of 103·2.

I was told that she had cleansed, but thought I had better make sure, and found that she had not. I removed the placenta, which was quite putrid, mopped her out well, inserted a pessary and gave Sod. Sal. internally. I saw the mare two or three times after and inserted pessaries and she made an uninterrupted recovery. I only record this because of the exceptional length of time the placenta was retained without serious harm resulting.

Actinomycosis Treated with Vaccine.

By A. LINTON ROBERTSON, M.R.C.V.S.,

Arbroath.

I RECORD the following cases hoping that they may prove of interest to veterinary surgeons who, like myself, practice in a district where actinomycosis is rampant.

CASE 1.—Three-quarter fat Irish bullock. Actinomycosis well developed in the tongue and lower jaw.

Before I was asked to attend the animal it had received a course of potassium iodide without showing any signs of improvement.

I gave ·25 c.c., ·5 c.c. and 1 c.c. of actinomycosis vaccine (Parke, Davis & Co.) at two-day intervals. The animal showed considerable improvement but was slaughtered as the owner was afraid that it might fall off in condition again.

CASE 2.—Half-fat Irish bullock with old-standing actinomycosis of the tongue and jaws, the lesions causing great deformity of the head. This animal belonged to the same owner as No. 1 and he had given it several courses of potassium iodide but with no result. I gave it ·25 c.c. ,·5 c.c. and 2 c.cs of actinomycosis vaccine (P.,D. & Co.) at two-day intervals, but as there was very little improvement I advised slaughter.

CASE 3.—Irish store bullock with actinomycosis beginning in the tongue. I gave ·25 c.c. vaccine (P.,D. & Co.) and two days later gave ·5 c.c. vaccine. Two days later all salivation had stopped and the

animal was feeding normally. This animal was fattened and did not show any further signs of the disease.

CASE 4.—I was asked to attend an Irish cow that was completely off her food and salivating. I found her to be suffering from actinomycosis, the tongue and sublingual muscles being very much swollen and as hard as a board. I prescribed the usual potassium iodide mixture—old customs die hard, and I had forgotten about the vaccine. Two days later the owner called and told me that the cow could not swallow the medicine and he was afraid of choking her and that she could not even take a drink of water, although she was evidently keen to do so.

Profiting by my previous experience with the vaccine, I gave her an initial dose of ·5 c.c. I saw her two days later and there was a decided improvement, the swellings were not so hard and the cow was looking cheerier. I gave her 1 c.c. of vaccine. Two days later the difference was remarkable, the swellings were only half the original size, salivation had greatly decreased and the cow was eating. I gave her 2 c.cs of vaccine.

I have not seen the cow since, but the owner informed me that she was all right a few days after the last dose of vaccine.

Four cases are not sufficient to draw any conclusions from, but after the remarkable recovery the cow made and the improvement shown by Cases 1 and 3 I shall certainly give the vaccine a further trial. Messrs. Parke, Davis & Co. suggested that I should give ·25 c.c. of the vaccine as an initial dose, increasing it to ·5 c.c. next dose, but in future I will give double this dose.

Notes on Three Cases of Hydrops Uterii.

By an Inexperienced Veterinarian.

I WAS called one night to a cow, in the language of the owner, "blown and constipated." On arrival I discovered in an ill-lit byre, a young cow in good condition and within six weeks of calving. She was standing tied up, head outstretched, legs apart, elbows outward, breathing fast and grunting at every breath, facial expression anxious, abdomen full and rounded, and distinct tympany in the left flank. No fæces had been passed for the last 36-48 hours, and then they were of fairly firm consistency and small in quantity. The animal had been like this for one or two days—gradually getting worse. One jumped to the conclusion that this was just a case of impaction of the rumen complicated with tympany. The probang was immediately passed and contrary to expectations only a very little gas escaped. Tympany of the left flank was not reduced, nor was the breathing any

XUM

more easy after this procedure. An anti-tympanitic drench was given.

Rectal examination was then carried out. Result : some difficulty in inserting one's arm into the rectum—the organ was empty except for a few hard and small pieces of fæces.

Probang passed again in about 15 minutes with the same negative result. It was then decided to use the trocar and canula, but this was a problem as one had no trocar. So we just had to use a makeshift, as one has to do so often in country practice. The metal nozzle, about eight inches long, was detached from the enema syringe and boiled thoroughly and about four yards of tape tied securely to its base. The whole placed in a weak antiseptic solution. The skin of the flank washed and dried, the animal forced against a wall and held. The skin and muscles boldly incised in a downward and forward direction for three to four inches, till a viscus obtruded itself into the wound. This was punctured with the knife and the home-made canula quickly inserted. Result : a steady, strong and profuse flow of clear fluid and great excitement on the part of the audience. This flow continued until fully 8 to 12 gallons of fluid had escaped, then it dwindled to a mere trickle, but steady pressure on the opposite flank forced out another gallon or two. The animal was now much easier. The tape was passed round the belly and the improvised canula tied securely and left *in situ*.

Diagnosis now, of course, Hydrops uterii and prognosis poor. The case seen again early next morning, when it was seen that the canula had evidently slipped from its position—the animal was just as distressed as ever, the abdomen just as full and rounded.

Slaughter was carried out later. Carcase was normal and set well. Calf well developed. Uterus enlarged and flabby.

This case should have taught me a lesson, but it didn't.

Only four days later I was called to another cow in another district with " indigestion."

SUBJECT.—A red cow in prime condition, beefy enough for slaughter. This animal had been stall fed and was due to calve in a month or so.

SYMPTOMS.—Cow off her feed, abdomen a little full and rounded, palpitation in the left flank gave one the impression that the rumen was impacted. Temperature normal, pulse fast but strong. Little or no fæces for 48 hours and animal had refused food and had not been seen to chew her cud for a day or so. No distress and animal otherwise quite healthy.

RECTAL EXAMINATION.—Rectum empty except for a small amount of hard fæces. A large viscus, wrongly believed to be the impacted rumen, could be felt.

TREATMENT.—Enemata and internally that panacea for nearly all ills of cattle, a red drench, plus nux vomica, gentian and mag.

sulph. Food withheld, but water to be given if desired. Seen in two days the animal was worse; abdomen full and distended, breathing rapid and distressed.

DIAGNOSIS.—Hydrops uterii. Prognosis, bad.

RESULT.—Slaughtered for food and not seen again.

Yet a third case, but this time on guard.

Called late one night to a cow very badly blown, we went fully prepared. On arrival we found a cow in the prime of life and in good condition, lying on her brisket in a loose box, breathing very distressed and difficult, expression very anxious, whole abdomen very distended—the left flank in this case very tympanitic and hard and raised above the level of the pin bone. She refused to get up—the probang was passed as she lay. Only a little gas escaped and no relief was obtained. This of course made us suspicious and her history was obtained. Young cow, third calf due to calve in a week, had been turned out on a fairly good pasture and fed and inspected daily. Nothing abnormal noticed until that day when she appeared a little full and uneasy and was brought into the shed, since when she had become rapidly worse.

Further attempts to get her up were successful and she got up laboriously and stood stiffly upon her legs and one could then see how really huge she was.

Owner despatched for water, soap, etc. Meanwhile, with one hand resting on her left flank the right flank was lightly tapped with the fingers of the other hand and the ripples or vibration set up in the fluid could be distinctly felt. Now certain it was Hydrops uterii, we proceeded straight away to a vaginal exploration. Uterus felt enormous, os closed. Careful and prolonged manœuvring with the index finger in a rotary direction finally opened the passage into the uterus and the flow of fluid was enormous—it just poured out, swept out over the floor, out of the door and away down the road. When it had almost ceased a great deal more was siphoned off with a clean tube. The animal was greatly relieved and returned to her normal size. A stimulant and diuretic and laxative drench was given and the patient left. Seen on the following day, she had calved a dead well-developed and well-nourished calf, but had not cleansed. She was feeding and apparently normal. She cleansed well in due course. A course of tonic and diuretic powders put her right and she is now, two months later, well and fit and milking well.

OBSERVATIONS.—(i) The first two cases should have been diagnosed earlier and would have been if rectal examination had been more thorough.

(ii) The carcases were in no case emaciated or anæmic.

(iii) Fœtuses all well developed.

XUM

(iv) The symptoms certainly are misleading and show how really necessary a careful rectal examination is in all cases of abdominal trouble, and further it just shows how easy it is for those of us who are young and inexperienced to make mistakes. *Experientia docet!*

Cystitis in the Cat.

By H. BUCKINGHAM, M.R.C.V.S.,
Norwich.

SUBJECT.—A common short-furred male neuter cat. Brought to me on January 2nd, 1928, said to be passing blood with his urine.

I found his bladder very distended with urine. His penis protruding, which when I pressed it, produced a small piece of mucus, which came away. I then emptied the bladder by gentle pressure.

The next day he emptied his bladder himself, and the day following he did the same, so I sent him home.

A few days later he was brought back again because he was exhibiting great pain and making a big noise when he strained to micturate. I repeated the treatment and sent him home.

This time he seemed in all ways well for a week, when he came back and I again relieved his trouble, but I kept him in hospital. In three days' time his bladder became *very* distended, so I took him to another veterinary surgeon who very kindly lent me a hand, and I was grateful for his help.

The cat was again chloroformed and his urine expelled after removing a piece of blood-stained mucus.

On January 17th he was in great pain and dying; so I "put him to sleep" under chloroform. I made a *post-mortem* examination and found the bladder very dark red in colour, all through its coats, especially the mucous and peritoneal membranes. Indeed, I do not remember ever seeing a bladder showing such typical lesions of acute inflammation.

I could find no calculus and the kidneys were perfectly healthy to the naked eye, in appearance.

I could find no cause for the acute cystitis. I wonder what did cause the trouble?

These cases have been a cause of anxiety to me. If left alone about 50 per cent. die. I have never been able to pass a catheter in a male cat.

Even if it is possible to do so, I cannot see what *permanent* good it would do. The catheter would only force the obstruction, be it a calculus or a piece of mucus, back into the bladder.

If you, Mr. Editor, or any of your readers, would tell me what to do in such cases I should be grateful.

Abstracts of Current Literature

Leo T. Parker, Attorney-at-Law, Cincinnati, Ohio.—How to Avoid Litigation.—*The North American Veterinarian.* June, 1927.

A VETERINARIAN is subjected to litigation from such common sources, as malpractice, collection of accounts, refusal, inability or tardiness in rendering services.

In view of the fact that numerous cases involving these points of the law have been decided, a knowledge of the outcome of the previous controversies will convey valuable information of how to avoid liability. In a quite recently decided case where payment for the value of the services rendered by the veterinarian was in controversy, the court entered into a lengthy explanation of the legal relations of a veterinarian and the owner of an animal being treated. In this case it was disclosed that the owner of an animal had approached the veterinarian and explained that his horse was seriously ill. The veterinarian proceeded to treat the animal without being requested to do so.

After the horse recovered, the veterinarian presented a bill for the services rendered, but the owner contended that he had not requested the veterinarian to treat the animal, and therefore refused to pay the account. The veterinarian filed suit to collect the amount of the bill. The court held the owner liable and in effect said that where an owner explains to a veterinarian the ailment of an animal, and the veterinarian treats it, the owner is liable for the amount of a reasonable charge for the services rendered, if he stands by and permits the veterinarian to perform the services without making it clear that he does not intend to pay the account.

In other words, where the owner of an animal permits a veterinarian to render services, the law implies that the owner intends to pay a reasonable amount for the services, irrespective whether the parties have arrived at an agreement of the charge. But where the owner states in plain language that he does not intend to pay, then, if the practitioner treats the animal, the law presumes that he agrees to render his services gratis.

In another case involving the same point of the law, the court explained that an implied contract exists between a veterinarian and the owner of an animal treated by which the veterinarian agrees to render efficient service and the owner agrees to pay a reasonable charge for the services.

XUM

In another case it is interesting to note that the court said: "A contract is defined to be an agreement between two or more persons for a good and sufficient consideration to do or not to do a thing. It is not necessary that a contract be in writing, and it may be either expressed or implied. An expressed contract is one where the terms of the agreement are stated in so many words; and an implied contract is where the law *presumes* a promise on the part of the party benefited. . . . . A veterinarian must be careful not to make false or deceptive statements, or otherwise mislead the owner of an animal before or during the period the services are rendered. By so doing he may be liable in damages for injuries which result to the animal, or he may forestall the collection of the account. Also it is important to know that silence on the part of a veterinarian may under certain circumstances effect deception."

For instance, in a recent litigation a higher court, in speaking of the effect of one party to a contract concealing a material fact from the other, said:

"The surrounding circumstances may be such that the effect of his silence is actually to produce a false impression . . . . and the making of an agreement or doing of some other act may in itself lead . . . . to believe that a certain fact exists and so amount to an affirmation of it."

But a party to a contract is not liable or responsible for an assertion or act of deception made by the other party, unless the party actually relies on the statement or act being true.

In various litigations the words spoken by the veterinarian at the time his services are engaged are important testimony for the consideration of the jury in deciding whether or not he is liable for malpractice.

For illustration, in a quite recently decided case it was disclosed that the owner of a horse explained the symptoms of the sick animal. Thereupon the veterinarian remarked, "I can cure that horse." The owner engaged the services of the surgeon, who immediately proceeded to examine the animal and afterwards decided that an operation was necessary. He performed an operation, as a result of which the horse died. The owner instituted legal proceedings against the veterinarian for damages, and the surgeon filed suit against the owner for the recovery of 100 dollars for the services rendered.

It is interesting to observe that the court held the veterinarian not entitled to a recovery for the services rendered, for the reason that he stated he could cure the horse. The court explained that an oral contract existed to the effect that the owner impliedly guaranteed to pay a reasonable amount for the services rendered provided that

the veterinarian carried out his part of the contract, which was that the horse should be cured. However, because the horse died while under the care of the surgeon, the court held that he had failed to fulfil his part of the agreement, and therefore the owner was not liable for the 100 dollar service fee. The court held the veterinarian not liable in damages for the death of the horse, because it was shown that in treating the animal he exercised ordinary care and used a degree of skill that may be reasonably expected from other veterinarians of average prudence and intelligence. This court explained further, that a veterinarian is not liable in damages for malpractice where he exercises ordinary care in treating an animal, although the owner is induced to employ him by a promise that the horse would be cured.

However, in another case where practically the same point of the law was involved, it was shown that a veterinarian verbally stated that he would cure an animal by the performance of an operation. The owner of the animal, relying upon the statement permitted the operation to be performed. The animal died and the owner sued for damages. In this instance, however, evidence was introduced to prove that the surgeon had failed to render reasonably skilful services, and he was held liable. So therefore, the law is well established that a veterinarian may not increase his liability for damages simply because he states that his services will cure an afflicted animal. On the other hand, where he makes a positive statement that he can cure an animal and fails to do so, he may be deprived of payment for his services.

As to whether or not the owner of an animal may legally deprive a veterinarian of his fee, generally depends upon whether the veterinarian carried out his part of the contract. And as previously mentioned the court implies that a contract exists between an owner and a veterinarian who renders services by the request of the owner. Still another common source of litigation is where the owner of an animal is dissatisfied with the services rendered and refuses to pay the amount of the fee on the grounds that the owner himself did not request the surgeon to treat the animal.

For instance, recently it was shown that an employee of a farm owner 'phoned a veterinarian to call and treat an animal. The owner refused to pay the bill. However, the court held him liable for the amount, because it was proved that he knew the surgeon was rendering services.

In cases of this nature, the owner is responsible if he stands by and permits a veterinarian to treat the animal.

YUM

Moreover, where the owner is not aware that the veterinarian is rendering services, he is liable if the person who engages the surgeon acts within the scope of his employment in doing so.

Directions for the Inspection of Meat in the Case of Glandular Tuberculosis.—*Zeitschrift für Fleisch und Milchhygiene.* April 15th and May 15th, 1926.

THE Minister of Agriculture for Saxony has published the following guide for the parts to be seized in case of glandular tuberculosis. These instructions are founded on the topography of the areas from which the affected glands receive the supply of lymph.

Bovines.

(1) GLANDS AT THE ENTRANCE OF THE CHEST.

Region of the Lymph Origin.	*Direction for Detention.*	*Extent of Seizure.*
Organs and Muscles	Seize only when tuberculosis associated with the superficial cervical or axillary glands	Seize the anterior quarter up to the fifth intercostal space.

(2) SUPERFICIAL CERVICAL GLANDS.

Skin and Muscles...	Seize in every case ...	Same as (1).

(3) AXILLARY GLANDS.

Muscles	Seize in every case ...	Same as (1).

(4) SUBLUMBAR AORTIC GLANDS.

Organs and Muscles	Seize only in rare cases where the kidneys and peritoneum are not the situation of tuberculous lesions.	Lumbar muscles and lumbar region of the iliospinal.

(5) DEEP INGUINAL GLANDS.

Organs and Muscles	Seize only if the incisions of the mammary glands and kidneys, in thin sections, and if the dissection of the uterus and bladder do not disclose any tuberculous lesion.	Separation of the posterior quarters by an incision between the last lumbar and sacrum after separation of the posterior part of the lumbar muscles.

(6) Inferior Iliac Glands.

Region of the Lymph Origin.	*Direction for Detention.*	*Extent of Seizure.*
Skin	No seizure	Separation of muscular masses by an incision passing by the ascending branch of the ilium as near as possible to the articulation of the hip after separation of the posterior part of the lumbar muscles.

(7) Popliteal Glands

Skin and Muscles...	Seize in every case ...	

(8) Ischiatic Glands.

Skin, Organs and Muscles.	Seize in all cases, except rare ones, where tuberculosis of the anus, rectum or genito-urinary organs exists.	Separation as in (5).

(9) Superficial Inguinal Glands.

Skin and Organs ...	No seizure.	

Swine.

(1) Superficial Cervical Glands.

Muscles	Seize in all cases ...	Separation of the anterior quarter with the head at the fourth intercostal space.

(2) Inferior Iliac Glands.

Skin	Seize only if the tuberculous foyers are not calcified or dry caseous and if the skin of the posterior quarter is not found free from tuberculosis.	Separation of the muscular masses by an incision between the last lumbar vertebra and the sacrum after separation of the posterior parts from the lumbar muscles.

(3) Popliteal Glands.

Muscles	Seize in all cases ...	Separation of the posterior limb by an incision passing between the last lumbar vertebra and sacrum after separation of the posterior parts from the lumbar muscles and abdominal wall.

Schellhase.—Ulcerations of the Abomasum in Adult Cattle.—*Berliner Tierarzt Woch.* April 22nd, 1927.

HUTYRA and Marek assert that ulcerations of the true stomach are very rare in the adult ox; Ostertag considers that these lesions are frequent in the calf.

Schellhase found that nearly half the cattle slaughtered in the abattoirs showed ulcerous lesions of the abomasum. In mild cases the mucosa shows linear redness, sometimes brownish, badly delimited. In the most frequent and serious cases blackish hæmorrhagic areas clearly outlined, were situated on the mucous folds in the form of lines half to one millimetre in width, being up to 10 centimetres long. Hæmorrhages on the lateral faces of the folds were very rare.

The stomach juices digest the hæmorrhagic foyers and give rise to superficial ulcers, with slightly tumefied edges and black depths. The ulcers are flat and only involve the mucosa; they cicatrise rapidly, only leaving a hardly visible scar. Of 61 cattle examined (44 cows and 17 heifers), S. found ulcerations in 19 cows and 6 heifers. The ulcerations do not seem to cause clinical symptoms, but it seems that transient digestive troubles are accompanied by numerous ulcerations. The causes of the lesions remain undetermined.

Schellhase.—The Importance of Necrosis of the Cotyledons in the Cause and Treatment of Retention of the Placenta in the Cow.—*Berliner Tierarzt. Woch.* June 18th, 1926.

IN a former note (1925) the author expresses the opinion that the cause of the retention of the placenta resides in numerous cases in necrosis of the cotyledons. His fresh observations show that in all cases of retention cotyledonary necrosis exists. The origin is an inflammation, noted by Pomayer, which encompasses the placental villosities, of such a kind that manual extraction is at first very painful; later on only, in the stage of necrosis a softening is produced which facilitates extraction. The necrosing process follows a variable evolution, possibly due to a variable virulence of the microbes that produce it. Theoretically, there are two forms:—

(*a*) Very rapid necrosis, partial or total, so that in two days the softening is complete. One then finds a friable mass of yellowish-brown colour, covering the surface of the cotyledons and detachment of the placenta is easy. The termination is generally favourable; as a result of uterine contractions, complete expulsion ensues.

(*b*) In this form the necrosis is very slow. In the case of expulsion of a dead fœtus, one finds the cotyledons hard and as a whole or in part of a deep red colour; the cotyledons are devoid of blood, yellowish colour on section one sees deep red coin shaped foyers. There is

hæmorrhagic necrosing inflammation. It is only about five days after parturition that one can peel out the placenta.

The causes of the retention are little understood; Pomayer believes they are due to bacterial necrosis. These considerations indicate the lines of treatment. For inflammations of the first type extraction is easy and expulsion is brought about without intervention. For those of the second type softening is indicated to facilitate placental separation. Fröhner has already recommended ferments capable of digesting albumen; he advises the following preparations: pepsin, 1 gramme in 100 grammes of water and 0·5 grammes of marine salt; add 10 grammes of cooked albumen finely divided, stirring often during three hours' heating until dissolving of the little yellowish-white flakes.

We have used the following quite successfully:—

Pepsin	.. 20 grammes=5 drachms
Marine Salt ..	15 grammes=3½ drachms
Warm Water	.. 3 litres=5 pints

In one case the cotyledons were completely softened after two days, and the placenta easily detached by torsion. After two other days the adherent shreds were completely digested.

Moore, Dr. R. C., St. Joseph, Mo.—Dilating the Teat.—*Jen-Sal Journal.* August, 1927.

In dilating the cow's teat we must keep in mind that we have fibrous tissue to stretch. It is a well-known fact that when any tissue of the body is rapidly and suddenly stretched, the fibres are more or less injured and in many cases ruptured. This is liable to be followed by a chronic form of inflammation, which renders the tissues more dense and stenosis of the teat is increased rather than diminished.

If, however, the tissue is gradually stretched, the parts carefully massaged during the stretching period, the teat canal can be enlarged to quite an extent without producing any injury to the tissue, and then it is not likely to recontract. This is true with any tissue in the body.

It is a well-known fact that the neck of the bladder can be expanded to permit the removal of large foreign bodies from the bladder without injury to the tissues if the stretching is done slowly and gradually. The same is true with the anal and rectal regions. The os uteri becomes expanded enormously under gradual pressure, while sudden distention would terminate in rupture. The same is true of any other orifice of the body.

For that reason, in dilating the teat I confine the cow in a decubital position and use a dilator with a very small end and a long, gradual taper that will enable me to stretch the teat canal to at least three-eighths of an inch in diameter and larger on a large cow. To do this the parts are first thoroughly cleansed, being sure there is no foreign substance in the infundibulum of the teat canal, then the anointed sound is introduced gradually, carefully and gently massaging the teat with the thumb and finger. I do not like to introduce the sound into a teat under any circumstances in less than ten minutes. If it is done in this manner, it is rarely ever necessary to repeat the operation.

It will be noticed by reference to a correct cut of the udder and teat that the milk sinus extends downward almost to the end of the teat, varying in size with the construction of the teat and udder. The teat canal is scarcely more than one-half, or at most five-eighths of an inch long, so that the stretching should be confined wholly to the lower end of the teat, unless there might be stenosis higher up from some pathological condition.

Milk in U.S.A. — Interesting Figures. — *The North-American Veterinarian.* December, 1927.

THE 100 million persons in the United States in 1916 consumed 80 billion pounds of milk. The 117 million in 1926 consumed 122 billion pounds.

The *per capita* consumption in 1916 was 804 pounds per 1,000 persons. In 1926 the *per capita* consumption was 1,040 pounds, an increase of 236 pounds per person.

In 1916 the average production per cow was 3,700 pounds of milk annually. In 1926 the average production had jumped to 4,700 pounds per cow, or an increase of exactly 1,000.

In 1916 there were 225 cows to each 1,000 consumers, or in other words it required a total of 22,500,000 cows to produce the 80 billion pounds of milk.

In 1926 there were only 189 cows per 1,000 persons, or a total of only 22,013,000 to supply the increment. These figures have considerable significance, in that they show that consumption of milk *per capitum* has increased enormously in a short period of 10 years, and also that the productivity of our cows has likewise made a remarkable increase.

The popular knowledge about the vitamin content of milk; popular confidence in the cleanliness and safety of the milk supply arising from the publicity that has been given to dairy sanitation and tuberculin testing; and a better understanding of scientific feeding appear to be among the main causes of this encouraging situation.

Lahaye, J.—Rejuvenation of Carrier Pigeons; Testicular Graft.— *Annales de Médécine Veterinaire.* July, 1926.

CARRIER pigeons fetch big prices; certain birds have been sold at 90 to 100,000 francs; a hen has been sold at 6,000 francs and a cock of repute brought in 18 to 20,000 francs a year. There is, therefore, some interest in prolonging the genital activity of certain birds.

Tests have been quite successful.

(1) Testicle grafting in the pigeon is an operation without any risk to the subject.

(2) The grafts placed between skin and muscles previously scarified, rapidly take up vascular connections and easily maintain their life.

(3) By testicular grafts one can rejuvenate subjects of great value and enable them to get at least two more pair of youngsters.

(4) Rejuvenation thus brought about lasts at least a year.

(5) Besides the faculty of renewed procreative ability, one sees in the subjects very great improvement of psychic and physical qualities: the males regained vigour, were lively and combative, the beauty of the plumage increases; the eyes glisten, the bird feeds better and regains weight.

(6) The general results appear towards the third week which follows the operation.

Correspondence

To The Editor,
VETERINARY JOURNAL. January 17th, 1928.

R.S.P.C.A. versus Veterinary Inspectors, Ministry of Agriculture.

DEAR SIR,—

My attention has been called to the paragraph in the VETERINARY JOURNAL for January, 1928, with regard to the prosecution by this Society of two veterinary officials of the Ministry of Agriculture at Swindon. One would imagine from the paragraph you publish that this Society had not the slightest justification for instituting the prosecution. I venture to point out to you that when an application was made for costs against this Society the magistrates refused the application for costs and stated that the Society in their opinion was justified in bringing the case forward.

I think that in fairness to this Society you might have mentioned this fact.

Yours faithfully,

E. G. FAIRHOLME,
Chief Secretary.

Royal Society for the Prevention
of Cruelty to Animals,
105, Jermyn Street,
London, S.W.1.

[In order to be quite fair to the R.S.P.C.A., and in response to the request made in the above letter, we confirm the paragraph quoted by the Secretary. Full details of the evidence are reported in the *North Wilts Herald* for Friday, January 6th, and the *Veterinary Record* for January 21st, so that the members of the profession and our other readers can try to discover for themselves the justification alluded to.—Editor, VETERINARY JOURNAL.]

Personal

Field-Marshal Earl Haig, K.T., G.C.B., O.M., G.C.V.O., K.C.I.E., Honorary Associate R.C.V.S.

BY the death of Field-Marshal Earl Haig the country has lost one of its most distinguished soldiers, and we, in our humble way, deplore the loss of a distinguished colleague; for in June, 1925, Earl Haig did our profession the great honour of accepting the Honorary Associateship of the Royal College of Veterinary Surgeons.

The speech which he made at the time was characteristic of his ever-present thought for those of his war comrades whom fortune had not smiled upon. He said, " In accepting the high honour I feel that it is those whom I represent whom you are honouring. You are honouring those excellent fellows who did so much for me that I could never do enough for them." His unexpected death is regretted by all.

Honorary Associateship of the R.C.V.S. for Sir John McFadyean.

AT the quarterly meeting of the Council of the Royal College of Veterinary Surgeons, Sir John McFadyean, the late Principal and Dean of the Royal Veterinary College, was awarded the Honorary Associateship of the College, which is the highest honour the Royal College of Veterinary Surgeons can bestow. The award was made on an unanimous vote and with acclamation, for it was felt that no one had deserved it more.

News

The Gold Coast Veterinary Department, 1926-7.

In view of the relatively small food production of the Gold Coast Colony, and exclusive of any question of exports, the encouragement of the livestock industry of the North is of the utmost importance, and the report of Capt. W. P. B. Beal, the Chief Veterinary Officer (Crown Agents, 2s.) of corresponding interest. As would be the case with a much stronger personnel than at present, the Veterinary Department was unable to cope with all the demands upon it, but it has made a valiant effort to do so. If, however, it has to depend upon increase in the staff of local Africans for its further usefulness, the outlook is limited, for the students in the Veterinary School numbered one in the first year, two in the second, and one in the third, although there was a foretaste of future possibilities in the enrolment as a learner of the first ex-Standard VII youth of the Northern Territories.

Good relations were maintained between the Veterinary Officers and the stock-breeders, and the Department has seriously taken in hand the question of fodder crops, for the other problems of the industry were already being aided by the supply of animals of better breed, by the neutralisation of weedy stock, and by attention to diseases in the Animal Dispensaries. The benefits were being seen in the gradual recovery of areas from cattle-plague and in the rate of increase in one district, where a livestock census showed an increase of 31 per cent. in five years, and not, as Capt. Beal says by an obvious slip, of 31 per cent. per annum. Horse and pig breeding continue to increase, but considering the quick returns from the latter, African interest is very slight, although it may improve now that a European has started an experimental pig farm in Ashanti. Departmental efforts in poultry breeding were less successful than usual, owing to the incubator being out of order, and to many eggs proving infertile.

The incidence of disease was comparatively mild, although owing to short supplies and delayed receipts of serum from Bamako outbreaks were unduly prolonged. However, the total number of deaths from the disease was about 2,000, while 5,305 animals were inoculated with anti-rinderpest serum. Other diseases call for little attention, although it is interesting to note that an outbreak of foot and mouth disease affecting cattle had no serious result. Among the lesser animals, two diseases appeared in epizootic form—virulent distemper among

XUM

dogs, and spirochætosis of fowls. One possibly useful discovery in connection with " medicines " was that a brand of cattle dip proved successful against termites, both when used as a spray and as a constituent of " swish."

The import trade in livestock continues to grow, in spite of French effort to divert it, and during the year 47,397 cattle, 79,059 sheep and goats, and 647 horses entered the Northern Territories, while 42,011 cattle and 60,584 sheep and goats passed over into Ashanti, the total value of the livestock entering Ashanti being over £347,000, a figure which included the value of 783,000 fowls. This trade in chickens is either a new or a previously unrecorded one, for it represents an increase on last year's figures of 600,000 birds. In hides and skins also there was an increase, the exports from Kumasi numbering 12,031 cowhides (four times the 1925 figure and twice that of 1924), 7,000 monkey skins, and 451 sheep and goat skins.

The total revenue collected by the Department was £11,617 from the new livestock importation tax (which, by the way, has neither caused complaints nor affected trade), and £226 from other sources. With regard to the complaint sometimes made as to the over-strictness of meat inspection in the Coast towns, it is of some interest to notice that at Tamale the inspection is admitted to be " very stiff " and far stricter than in most suburban districts in England. In that case, may it not err on the side of over carefulness, even after allowing for the extra caution necessary in a tropical climate?—*West Africa*, Jan. 28th, 1928.

Methods of Killing Cats—Veterinary Inspector Vindicated—Appeal Against Conviction Allowed.

METHODS of killing cats by chloroform were discussed at the Surrey Sessions, at Guildford, on Saturday, in an appeal by Richard Johnson Sargent against a conviction by the Guildford magistrates in November, when he was fined £10, with 10 guineas costs, for causing unnecessary suffering to two cats. The respondent was Benjamin Butcher, an inspector of the R.S.P.C.A.

It had been alleged at the police-court that Sargent left the cats in a lethal chamber containing chloroform for half an hour, but closed the vent-hole. When he took them to the destructor works they were breathing, and one tried to get up. He then, it was alleged, hit both cats with a sledge hammer, and the one cat again tried to get to its feet.

XUM

On Saturday, Mr. Alexander Pierse, a veterinary surgeon, said he had carried out many experiments in chloroforming cats for the R.S.P.C.A. Years ago he used to keep the vent-hole in the lethal chamber closed, but came to the conclusion that it was a cruel method, and now he kept it open until the animals became unconscious. A cat should be kept in the chamber at least an hour. He would have drowned these cats instead of hitting them with a hammer.

Mr. W. R. Kennedy, a veterinary surgeon, of Kingston-on-Thames, said he would have left the cats in longer than half an hour. When a cat was dead its hair stood up straight.

Mr. Sargent, in evidence, said his appointment as veterinary inspector to the Guildford Corporation had been suspended pending the appeal. In two years he had destroyed about 600 cats for a Guildford society, and his experience was that half an hour in the chamber was long enough to kill them. He denied that one cat tried to get up. Both animals were unconscious, and knew nothing about being hit with the hammer.

Cross-examined by Mr. Gordon Jones, for the respondent, as to why he did not drown the animals, Mr. Sargent said it was a more painful death. He spoke from experience, because he had been nearly drowned twice.

Prof. F. T. G. Hobday, Hon. Veterinary Surgeon to the King, and Principal of the Royal Veterinary College, said he had known Mr. Sargent for 27 years as a most humane man. Mr. Sargent's method of chloroforming was quite proper, and he himself would have expected the cats to be dead in half an hour. He did not believe the cats suffered any pain.

Two other professors gave supporting evidence, and the Recorder allowed the appeal, with costs.—*Morning Advertiser.*

XUM

Reviews

Manual of Veterinary Bacteriology. Edited by RAYMOND KELSER, D.V.M. Ph.D. 525 Pages. 87 Illustrations. 25s. net. London: Bailli re, Tindall & Cox.

TEXT BOOKS on Veterinary Bacteriology are all too few, and it is for that reason, amongst others, that we welcome this valuable addition to the library of veterinary literature.

It is not only the latest addition of its kind, but one of the handiest and most complete for either student or practitioner, to whom we recommend it with every confidence.

The Annual Report of the Surgeon-General, U.S. Army, 1927. Washington: United States Government Printing Office.

AN interesting book of 500 pages containing a detailed account of the year's work of the Medical Dept. of the U.S. Army. To many of our readers it will no doubt be a surprise to learn that the U.S. Veterinary Corps is an integral part of the Medical Dept. of the Army. Whether this is good or not is questionable. The service may gain in many ways, but it loses its independence.

In the U.S. medical services the Veterinary Corps evidently takes precedence after the dental and nursing sections. The strength of the Veterinary Corps for the year ending June, 1927, was 126 officers, and the number of enlisted personnel of the Medical Dept. allotted to the Veterinary Service was 608. The average number of animals in the army was 41,232.

In addition to the professional care of animals, the U.S. army regulations prescribe that the Veterinary Corps shall be responsible for the competent and thorough inspection of all foods of animal origin intended for the use of the troops. The statement is made that 141,952,245 lbs. of such products were examined, of which 1,077,152 lbs. were rejected. In this section the U.S. Army is much ahead of the British Services. The latter, although possessing a veterinary service second to none, still relegate such inspection to the A.S.C. and medical services. A veterinary bulletin is issued monthly as a supplement to the medical one. Matters of general and professional interest are published. This bulletin is a great success, and at present they are unable to cope with all the mail orders outside the service.

Work on equipment has been carried on during the year satisfactorily. It is interesting to note that the U.S. Service has, like the British Service, made no progress in the development of a satisfactory veterinary ambulance. At the Veterinary School specialist courses, which are of considerable value, are given to officers and men.

Veterinary officers attend command and general staff schools, cavalry schools, medical field service courses, and courses on horse breeding. From this it will be seen that the U.S. veterinary officer's career is full of opportunities. It is doubtful if a British veterinary officer has ever attended a course at a British staff college. The veterinary laboratory is maintained at the Army Medical School, and judging from the work shown in the report has been fully occupied in routine examinations and the preparation of biological products. A veterinary officer is assigned for full duty with the Medical Research Board, and considerable work in tropical diseases has been done in Manila.

Masses of figures illustrate the good work done under the heading of

Meat and Dairy Hygiene and Forage Inspection. Purchasing boards and breeding depots have each veterinary representatives, and the inspection of Government stallions in civil hands is performed by Army veterinary officers where possible. At the breeding depots infection with Hæmolytic Streptococci has been found to be the cause of abortion. Since the veterinary laboratory has developed a vaccine no abortions other than those due to Traumatic or mismanagement causes.—" A Very Striking Result."

The greatest need of the veterinary service at present is adequate hospital accommodation of a permanent type. It is pleasing to note that the medical depot, which is responsible, recognises this, and a sum of money has been made available. Under Animal Morbidity, in horses influenza and tinea have been the greatest scourges. In Mules Thrush, diseases of the feet seem to be very common in mules. Canker is a serious and growing menace, and the Research Board has not yet reported a means by which the losses may be reduced.

Glanders has been nearly eliminated by strict measures, but the 15 cases reported are an increase on the previous year's figures.

Strangles shows a substantial decrease. Epizootic lymphangitis is only prevalent in the Philippines. The number of days lost per case in this disease is high, i.e. 74.67.

One cannot close this review without commenting upon the marvellous increase in the reserve personnel during the last six years. The increase has been greater than in any other section of the Medical Dept. In 1919 there were 93 reserve officers, in 1927 1,055.

This in a country which is probably the most mechanised of any in the world, contrasts strangely with the British policy as exemplified in the latest army order disbanding the whole of the Territorial Mobile Veterinary Sections.

A Text Book of the One-Humped Camel. By CAPT. A. S. LEESE, M.R.C.V.S. Pp. 382, 20 illustrations. Published by Messrs. Haynes & Son, Stamford. Price 21s.

CAPT. A. S. LEESE is so well known as a British veterinary authority on the camel, that one looks for much of interest and value in anything from his pen; and in the " Text Book of the One-Humped Camel " one is not disappointed, for the author has condensed a mint of information of value to everyone, professional man or layman, who has camels under his care; the chief value of the information being in the fact that it is all of a practical nature and knowledge which Capt. Leese gained " first hand "; he having lived for some years directly amongst the camel breeders and drivers.

The book is divided into two sections, one concerned with the habits and management of the animal in health, and the other a veterinary section which deals with the camel in disease. These sections have a particular value, again from the practical aspect, and on account of the fact that Capt. Leese gained his information first-hand, because the diseases are not merely named in the technical language of the veterinarian, but also in the vernacular—a procedure of the greatest value to the graduate whose lot is cast amongst camels for the first time. This, too, is amplified by a combined glossary of vernacular and technical words. In fact, it is

XUM

a book which no veterinarian whose patients include the camel can possibly afford to do without, and every Government department in India and the East should provide its official book-case with at least one copy. It is well written and typical of the plodding, painstaking, character of the author. Very little which is of interest for the camel in health and disease, has been omitted ; the illustrations are excellent, and the British veterinary profession is to be congratulated upon the addition which Capt. Leese has made to our all-too-scanty library of literature. Above all, too, the author has generously acknowledged his indebtedness not only to his English colleagues, amongst whom are mentioned Cross, Mason, Robogliati, and Knowles, but also to French and Italian colleagues.

Notice

The Royal Sanitary Institute.

Patron : His Majesty The King.

Congress at Plymouth, July 16th to 21st, 1928.

Arranged at the invitation of the Town Council.

President : The Right Hon. Viscount Astor.

Popular Lecture by Professor W. E. Dixon, M.A., M.D., D.P.H., F.R.S., of the Pharmacological Laboratory, University of Cambridge.

Sectional Meetings for the reading and discussion of papers relating to :—

(*a*) Sanitary Science and Preventive Medicine. President : Dr. L. Rajchman, Medical Director, Secretary of the Health Committee, League of Nations. Recording Secretary : Charles Porter, M.D., B.Sc., Medical Officer of Health, St. Marylebone.

(*b*) Engineering and Architecture. President : John D. Watson, M.Inst.C.E. Recording Secretary : W. Lionel Jenkins, M.A., B.Sc., M.Inst.C.E., Borough Engineer and Surveyor, West Ham.

(*c*) Maternity and Child Welfare, including School Hygiene. President : The Viscountess Astor, M.P. Recording Secretary : James Fenton, M.D., D.P.H., Medical Officer of Health, Kensington.

(*d*) Personal and Domestic Hygiene. President : The Mayoress of Plymouth. Recording Secretary :

(*e*) Hygiene of Food. President :
Recording Secretary : W. W. Jameson, M.D., D.P.H., Medical Officer of Health, Hornsey.

(*f*) Hygiene in Industry. President : The Right Hon. J. Ramsay MacDonald, P.C., LL.D., M.P. Recording Secretary : Joseph Cates, M.D., B.S., D.P.H., Medical Officer of Health, Surrey C.C.

(*g*) Veterinary Hygiene. President : Major F. T. G. Hobday, C.M.G., F.R.C.V.S., F.R.S.E., Principal of Royal Veterinary College, London. Recording Secretary : James R. Hayhurst, M.R.C.V.S., D.V.S.M.

Superintendent and Chief Veterinary Inspector, Metropolitan Cattle Market, Islington.

Conferences :—

(*i*) REPRESENTATIVES OF SANITARY AUTHORITIES. President: Councillor W. H. J. Priest, the Worshipful the Mayor of Plymouth. Recording Secretary: Prof. F. E. Wynne, M.B., D.P.H., Medical Officer of Health, Sheffield.

(*ii*) REPRESENTATIVES OF PORT SANITARY AUTHORITIES. President: Councillor H. M. Medland, Chairman of the Public Health Committee, Plymouth. Recording Secretary: W. M. Willoughby, M.D., D.P.H., Medical Officer of Health, Port of London.

(*iii*) NATIONAL HEALTH INSURANCE SERVICES. President: Henry Lesser, LL.B., President of the National Association of Insurance Committees. Recording Secretary: Edwin Potts, O.B.E., F.F.I., Hon. Secretary, National Association of Insurance Committees, 20, New Elvet, Durham.

(*iv*) MEDICAL OFFICERS OF HEALTH. President: James Wheatley, M.D., D.P.H., President, Society of Medical Officers of Health; Medical Officer of Health, Shropshire C.C. Recording Secretary: H. J. Milligan, M.C., M.D., D.P.H., Medical Officer of Health, Reading.

(*v*) ENGINEERS AND SURVEYORS. President: Edward Willis, M.Inst.C.E., F.S.I., M.I.Mech.E., President, Institution of Municipal and County Engineers; Engineer and Surveyor, Brentford and Chiswick U.D.C. Recording Secretary: H. Morley Lawson, M.Inst.M.&Cy.E., Borough Engineer and Surveyor, Deptford.

(*vi*) SANITARY INSPECTORS. President: E. Whone, Chairman, Sanitary Inspectors' Association; Sanitary Inspector, Cowbridge R.D.C. Recording Secretary: John H. Clarke, Chief Sanitary Inspector, Chiswick.

(*vii*) HEALTH VISITORS. President:
Recording Secretary: Miss H. Weir, Superintendent Health Visitor, Northumberland C.C.

General Arrangements.

TICKETS.—Fellows, Members and Associates of the Institute are supplied with tickets for the Congress on application to the Secretary before the Congress, or they may be obtained at the Reception Room during the meeting.

To those not connected with the Institute, Congress Tickets will be issued, entitling the holder to the use of the Reception Room, to admission to the Presidential and other Addresses, to all Meetings, to the Exhibition of the Institute, and to copies of the Journal of the Institute containing the proceedings of the Congress. The price of the Congress Tickets is £1 11s. 6d. each. Ladies' Tickets (not including copies of the proceedings), 10s. 6d. each.

PAPERS AND DISCUSSIONS.—The Council invite Papers on subjects relating to Health and Sanitary Science. Manuscripts should not exceed 2,000 words, and must be accompanied by a short abstract (of about 200-250 words) both for the convenience of the Press at the Congress, and for insertion, subject to the approval of the Council, in the Journal of the Institute, should it be decided not to publish the Paper *in extenso*. Abstracts of accepted papers are, as far as possible, printed and dis-

XUM

tributed in the Reception Room before they are discussed. No previously published Paper can be accepted. The acceptance of Papers and the days on which they are to be discussed, are determined by the Council before the beginning of the Meeting, and published in the Daily Programmes, obtainable in the Reception Room; authors are notified two or three weeks before the Congress. The Council reserve the right of refusing any Papers sent in; and, in the case of those accepted, the discussion of them must depend on the time at the disposal of the Meeting. Papers accepted for the Congress cannot be published by the Authors, except by permission of the Council. The Council reserve to themselves the privilege of printing any Paper, either wholly or in part, or of refraining from the publication thereof, if they see fit.

Authors should forward their manuscript by post as early as possible, *and in any case not later than June 7th*, addressed to the Secretary, The Royal Sanitary Institute, 90, Buckingham Palace Road, London, S.W.1.

RESOLUTIONS.—Resolutions put from the Chair at the Meetings must only be in the form of recommendations to the Council of the Institute, by whom all such recommendations will be carefully considered. The number of persons present, and the proportions voting must be recorded by the Chairman for the information of the Council.

No Resolution can be proposed at any of the Sections or Conferences unless sent to the Secretary of the Section or Conference in time for approval and insertion in the Programme for the day on which it is to be proposed.

No Resolutions can be put to the Meeting unless, in the opinion of the President (or Chairman for the time being), the Section is adequately represented.

Health Authorities have been invited to appoint Delegates to the Congress.

Visits are arranged during the Congress to places of sanitary interest.

A Health Exhibition, illustrating municipal sanitation and appliances relating to domestic health and comfort, will be arranged in connection with the meeting in the Drill Hall.

Offices of the Institute: 90, Buckingham Palace Road, London, S.W.1.

Publishers' Notices

All communications should be addressed to 7 & 8, Henrietta Street, Covent Garden, London, W.C.2. Telephone: Gerrard 4646. Telegrams: "Bailliere, Rand, London."

Letters for the JOURNAL, literary contributions, reports, notices, books for review, exchanges, new instruments or materials, and all matter for publication (except advertisements) should be addressed to the Editor.

Copy of advertisements should be in the hands of the publishers—Bailliere, Tindall and Cox—not later than the 25th of the month, or if proof is required, not later than 23rd.

Binding Cases for Volume 83 and any other previous volumes can be obtained from the publishers. Price 2s. 9d. post free.

Annual Subscription, 21s. ($5.00 U.S.A. currency) post free.